UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,580	12/20/2001	Brian R. Janes	01-659US	3268

719 7590 01/11/2006

CATERPILLAR INC.
100 N.E. ADAMS STREET
PATENT DEPT.
PEORIA, IL 616296490

EXAMINER	
LOWE, MICHAEL S	

ART UNIT	PAPER NUMBER
3652	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/028,580	JANES ET AL.	
	Examiner	Art Unit	
	M. Scott Lowe	3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-14,31-34 and 36-48* is/are pending in the application.

4a) Of the above claim(s) *36-46* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-14,31-34,47 and 48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 101 & § 112

After consideration of the amendment filed 9/29/04, the indication of allowability of claims 1-7 has been withdrawn.

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1,4,11,12,13,47,48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 states " a second load member structured and arranged for coupling to the first load bearing member". The last 8 lines of the claim lay out a coupling means of the second load member but are not correlated with to the aforementioned limitation since the second load member may or may not be coupled to the first load bearing member.

Claim 12 fails to define the orientation of the centerline axis of the plates. For example the centerline could be that of the longitudinal plane the plates are in or it could be perpendicular to longitudinal plane of the plates (stacked plates). If claim 12 is better defined to have the collinear centerlines be in the longitudinal plane of the plates then this claim might be allowable over the known prior art.

Claim 13 recites the limitation "said first bearing member" in line 2. There is insufficient antecedent basis for this limitation in the claim. For sake of examination it is assumed applicant meant, "said first load bearing member".

Claims 1,4,11,12,13,47,48 are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. See MPEP 2173.05p(II).

Claims 4,11,47,48 are rejected under 35 U.S.C. 101 because the claim overlaps two different statutory classes of invention (apparatus and process/method). See MPEP 2173.05p(II).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1,4-9,11,13,14,31-34,47,48, are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson (5,611,657) in view of Liston (US 5,503,234).

Re claims 1,31,47, Peterson teaches a load bearing arrangement for use with a work machine 10 of the type having a platform, comprising:

a first load bearing member (any of the various internal or external supports (of the vehicle) for the arm such as (but not limited to) linkage 64) structured and arranged for coupling to the platform (base of vehicle 10 or even wheels 24,26);

a second load bearing member 56 structured and arranged for coupling to the first load bearing member and having an end comprising a material having a first yield strength; an aperture 96 formed in said end and having an aperture wall; at least one support member 122 contained within said aperture adjacent to at least a portion of said aperture wall, said support member having an opening sized to receive a bearing (column 4, line 30, "other device"); and

said support member 122 having a second yield strength. Peterson is silent on the whether the second yield strength is greater than said first yield strength. However, Liston teaches bearing sections having higher yield strength in order to improve performance and durability. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Peterson by Liston to have the second yield strength be greater than said first yield strength in order to improve performance and durability.

Re claims 4,11,48, Peterson teaches all the claimed structure, while process limitations (such as "laser welding") are method limitations. Applicant has not shown how these steps would add structural limitations to the apparatus claim.

Re claims 5, Peterson teaches load bearing arrangement wherein said first load bearing member (any of the various inherent internal or external supports/walls (of the vehicle) for the arm 56 such as (but not limited to) linkage 64) comprises:

at least one top plate (not numbered, figure 1);

at least one bottom plate (not numbered, figure 1); and

at least one pair of spaced apart side plates (not numbered, figure 1) each attached to said top plate and said bottom plate.

Re claims 6, Peterson teaches load bearing arrangement wherein said top plate comprises at least one integral mounting structure (not numbered, figure 1).

Re claims 7, Peterson teaches a load bearing arrangement comprising a substantially cylindrical attachment structure 62, 64, etc., extending from at least one said side wall; and wherein said side wall is attached to said attachment structure.

Re claim 8, Peterson teaches a load bearing arrangement wherein said first load bearing member has a transverse width; and said attachment structure spans said transverse width.

Re claim 9, Peterson teaches a load bearing arrangement further comprising at least one reinforcing structure (inherent internal supports, or the top and bottom plates) attached to at least one said side plate.

Re claims 13,14,33,34, Peterson teaches a pivotally connected attachment bucket 54.

Re claim 32, Peterson teaches first and said second movement means comprises hydraulic cylinders.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson (5,611,657) in view of Liston (US 5,503,234) as applied in claim 1, and further in view of Yancy (US 3,902,295).

Re claim 10, Peterson teaches a load bearing arrangement wherein said reinforcing structure comprises a base portion (inherent, all structures have a base of some sort); and a rib portion (inherent, for example the "thickness" of a plate, where the base is a surface of the plate) extending from said base portion. Peterson does not teach the rib portion being "L" shaped. Yancy teaches providing "L" shaped rib portions 31 (figures 4,6) in order to reinforce a load bearing member. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Peterson by the general teaching of Yancy to have "L" shaped rib portions in order to reinforce a load bearing member.

Claims 4,11,48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson (5,611,657) in view of Westbroek (US 6,060,682) and further in view of El Wakil ("Processes and Design for Manufacturing").

Regarding the above rejections of claims 4,11,48, over Peterson with non-structural limitations (such as welding and heat simulation) while the above rejections are complete unto themselves, for sake of completeness, while not required, the following rejections are put forward for the benefit of the applicant:

Regarding the above claims 4,11,48, El Wakil (pages 71-73,87-91) teaches weldments being simulated for effects of heat in order to choose the correct type of weld

and to insure the strength of the welded structure. Westbroek teaches (column 1) that weldment design and simulations are done prior actual construction in order to assure strong welds. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Peterson by El Wakil and Westbroek to have weldments being simulated for effects of heat in order to choose prior to construction the correct type of weld and to insure the strength of the welded structure.

For sake of completeness, while not required, the following rejections are put forward for the benefit of the applicant to address process limitations improperly placed in the apparatus claims:

Claims 47,48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walth et al (US 6,158,949) in view of Liston (US 5,503,234) and further in view of El Wakil ("Processes and Design for Manufacturing").

Re claim 47, Walth teaches a load bearing arrangement for use with a work machine of the type having a platform 80, comprising:

at least one load bearing member 10 structured and arranged for coupling to the platform 80;

said load bearing member 10 having an end comprising a material having a first yield strength;

an aperture 70,54 formed in said end and having an aperture wall; at least one support member 56 contained within said aperture adjacent to at least a portion of said aperture wall, said support member having an opening sized to receive a bearing; and said support member 56 having a second yield strength. Walth is silent on the whether the second yield strength is greater than said first yield strength. However, Liston teaches bearing sections having higher yield strength in order to improve performance and durability. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by Liston to have the second yield strength be greater than said first yield strength in order to improve performance and durability.

Re claim 48, Walth teaches items connected together but is silent on laser welding. El Wakil teaches (pages 85-87) laser welding as a versatile means of connecting items without causing excessive heat related problems (page 86). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by El Wakil to use laser welding in order to have a versatile means of connecting items without causing excessive heat related problems.

Conclusion

Applicant's arguments filed 10/14/05 have been fully considered but they are not persuasive.

Applicant's arguments that the 35 U.S.C. 112 rejections are improper are not persuasive. The claims must be written clear enough to be understood what is actually being claimed. These claims are not broadly claimed but rather unclearly claimed.

Applicant's (such as page 16, second paragraph of the remarks filed 10/14/05) arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Peterson and Walth teach the main claimed structure found in the independent claims. El Wakil clearly teaches on page 71 various types of welding including laser welding and why it would be obvious to use (page 86) and heat simulation (page 71,89-91). El Wakil does not need to teach the structure since it is taught by the primary reference (Walth or Peterson). Liston is not used to teach heat simulation. Rather Liston is used as a teaching of having higher yield strength at contact surfaces under relatively larger forces. Westbroeck is also not used for a teaching of heat simulation. As addressed in the rejection section, the welding and pressure-fitting arguments and limitations are not appropriate for apparatus claims and should be removed. If the

applicant is trying to claim actual structural difference, then the limitations should be written to point out actual structural differences.

The references sent previously, such as "Material Hardness", show that the hardness teachings apply to yield strength. Liston is only used for the hardness and yield strength teachings. The structure is found in the other references as mentioned above.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Scott Lowe whose telephone number is (571) 272-6929. The examiner can normally be reached on 6:30am-4:30pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on (571) 272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

msl

EILEEN D. LILLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600